b) possibly misinterpretation of the claim language, and

c) a combination of two totally unrelated references.

The newly cited Clark et al. reference teaches

a) a base, and

b) wrapped around this base a flexible belt or band that can be moved relative to the base, i.e. by rotation around the base or by axial movement relative to the base so that there is movement in two directions.

To relate to the present invention it is first necessary to interpret the belt as equivalent to the platform which with imagination can be seen. But, then it is necessary to add moving means to move the platform relative to the base where no such means is disclosed or suggested by the reference.

The concept of moving a platform in two mutually perpendicular directions is not new nor is it claimed to be new by Applicant. Thus, the teaching of Clark et al adds nothing whatsoever to the teachings of Cadoz et al. that Applicant has not already either admitted to or accepted as being known in the Disclosure.

It is submitted the patentability must be determined based on Cadoz et al. and whether Cadoz et al. teaches or suggests a system for moving a platform similar to so as to make the platform moving system of the present invention obvious.

Before reviewing Cadoz et al., it is believed that analysis of the claim language used to define the present invention in the broadest claim (claim 1) is in order as it is believed some of the inherent limitations in the claim may be being overlooked or misinterpreted by the Examiner in making the rejection.

The claimed present invention includes:

"A controller comprising

1 a base,

2 a platform,

3 means for mounting said platform for a range of movement in a plane in each of two different directions,

4 a first magnetic force applying means including

4A a first magnet means mounted on said base and

4B a first cooperating magnetic force generating means mounted on and moveable with said platform in position to interact with said

first magnet means,

5. a second magnetic force applying means including

5A a second magnet means mounted on said base and

5B a second cooperating magnetic force generating means mounted on and moveable with said platform in a position to interact with said second magnet means,

6. said first and said second magnet means being fixed relative to each other on said base and

7 said first and said second cooperating magnet force generating means being fixed relative to each other on said platform,

8. said first force applying means being positioned and constructed to controllably apply selected forces to said platform in one of said two different directions and

9. said second force applying means being constructed and positioned to controllably apply selected forces to said platform in the other of said two different directions

10. and control means to selectively control said first and said second force applying means to generate said selected forces."

(numbering and paragraph separation of the elements added)

The fixed relative positions of the magnet means on the base (6.) and the fixed relative positions of the cooperating magnet means on the platform (7) is an extremely important limitation in that it is necessary for the driving of the platform and it clearly distinguishes the invention from the prior art including Cadoz et al.

Similarly the movement in one direction obtained by the first force applying means and movement in the other direction obtained by the second force applying means is not attained by Cadoz et al.

Turning now to Cadoz et al., this patent is primarily directed to a keyboard structure incorporating magnets and individually mounted cooperating coils constructed so that the keys in effect moved the coils or are alternatively are moved by the coils. there is no platform common to at least two keys or coils - all of the coils may move relative to one another. The cooperating elements (coils) are each independently movable and are not mounted in a fixed relationship on a single platform, thus, the structure defined in Applicant's claims (paragraph 7) is very clearly different from the structure of this patent.

The Examiner takes the liberty of interpreting statement in column 7 lines 4 to 6 of Cadoz et al. that says

"In case where it is the rod that actuates the keys, it can be used for simulating the behaviour of a joystick with two degrees of freedom."

as meaning two coils oriented in different directions (in the more limited claims mutually perpendicular directions) to obtain two degrees of freedom without an iota of support from the teaching of Cadoz et al. as in all cases in Cadoz et al. the coils are all oriented in the same direction.

For the Examiner to make this interpretation further requires lifting the above quoted statement completely out of context and ignoring the whole of the surrounding disclosure which is dealing specifically with the structure as defined or shown by Cadoz in Figure 8. Figure 8, as will be apparent includes two independently movable members, 80-1 and 80-2 which each of which may be individually and independently moved as indicated by the arrows in the up and down direction (i.e both elements move in the same or parallel directions not different directions). Movement of these keys or elements, 80-1 or 80-2, changes the position of the centre or end of arc on which the arm 82 carrying the arm 90 and the end-point 92 is moved. When there is movement, say to lift the pivot point 84 of the arm 82 as indicated in Figure 8, there is movement of the point 92 on an arc. on its mounting on element 80-1. Similarly, if the element 80-1 moves, there is movement on a second arc. In each case the movements of the coils 80-1 and 80-2 are in the parallel directions not in two different directions. Furthermore the connection between the arc member 88 and the element 80-1 must permit relative movement between the coil and, if one can argue that the arm 82 is a platform, the platform which is contrary to Applicant's claimed structure and would prohibit attaining the results attained by Applicant.

Further as will be apparent all movements of the element 92 are along arcuate paths (pivoting on axis 84 or at the connection between section 88 and element 80-1, i.e. there is no movement in a first direction or in a second direction but rather movements are along arcs and the centre of the arcs are adjusted. The positions of centres at opposite ends of the arm 82 may be infinitely adjusted within a selected range by vertical movement of the elements 80-1 and 80-2.

Thus, the simulated joystick having two degrees of freedom as indicated by the

point 92 does not have movement in either one direction or another.

It is apparent that Cadoz in all cases use some form of lever mechanism there being a separate lever mechanism for each magnetic operated system, i.e. each operating via cooperating coil and permanent magnet. see also Column 6 lines 44 to 48 which state

> " Thus, according to a variant of the invention, it is possible to associate several keys in order to actuate, through a single control device, several keys of a keyboard or, conversely, to have the motors of several keys cause a movement with several degrees of freedom."

(Each motor of Cadoz is a modular unit as shown in Figure 5, 6 or 10 each of which includes a individual guide which precludes its use in two-degree- of- freedom actuation without a linkage of some kind.)

As above indicated, in all cases, in Cadoz et al., the coils are individually mounted, i.e. totally independent of each other and can be moved independently relative to one another. This is totally contrary to the way in which the Examiner in the office action p 3, first paragraph suggests the force applying means of Cadoz et al. be applied to Clark. The Examiner states that it would be obvious to have first and second magnetic force applying means of Cadoz's in the device of Clark with the first and second magnet means being positioned fixatively relative to each other on the base and the first and second cooperating magnetic means being positioned fixatively relative to each other on the platform. This teaching is only found in Applicant's disclosure not Cadoz et al. and certainly not in Clark et al.

If one were to apply Cadoz's two-degrees-of-freedom joystick to Clark et al. one would have to be led to do so by teachings not found in either of these references. Even if, for some reason, this was to be done one would utilize the two degree of freedom system taught in Cadoz et al. (Figure 8), have two totally independent and relatively movable members 80-1 and 80-2 used to displace the opposite ends of a lever 82 and would connect the pin 92 to the belt of Clark et al. This is not applicant's invention.

Construction of the structure fabricated by the Examiner based on the two references, would require totally rebuilding Cadoz et al. based on Applicant's teaching and then incorporating them into Clark et al.

There is nothing whatsoever in Clark et al. to suggest the combination of his device with Cadoz et al. nor is there any suggestion what-so-ever in Cadoz et al. that

would suggest to one of ordinary skill in the art that these teaching should be combined to obtain a desired result. It is believed the law clearly require this type of information be found in the references not just in the Applicant's disclosure. Nothing in these cited patents suggest that it would be obvious to incorporate the Cadoz et al. system in Clark. This combination of particular modifications specified in the Office Action could only be attained by hindsight by one having the instant application before him and by extrapolating well beyond the teachings of Cadoz et al., restructuring the elements in Cadoz et al. and adding further elements not found in Cadoz et al. in an attempt to construct Applicant's invention.

Rejecting claims 8, 11 and 14, the Examiner takes great liberties with the disclosure of Cadoz et al. and finds that it is obvious to modify Cadoz et al. to make the projected area of the magnetic field constant so that constant magnetic force can be generated which provides constant tactile feedback force to the operator. Nothing in Cadoz et al. suggests he would do this nor does the structure he discloses incorporate this. In fact, it is clear from Figure 6 of Cadoz that if the coil 40 moved to the extreme left or right hand position, one side of the coil 40 would project into the gap 75 so that the projected area need not be maintained constant.

On p 5, the Examiner states that in view of the teachings of Cadoz et al., (which teaching of Cadoz ?), it is well known that movement in two degrees of freedom can be in the X and Y direction and in such case, a second magnetic force applying means would have been arranged in orthogonal direction to the first direction since the devices work in two perpendicular directions. As above explained, two-degrees-of-freedom of joystick as represented at 92 in Figure 8 in Cadoz et al., does not have specific X and Y direction but rather operates on arcs and moves the axis of the arc.

Cadoz et al. does use two actuators to obtain two-degrees-of-freedom, but they are not positioned orthogonal to each other. According to the teachings of Cadoz et al. to obtain two-degrees-of-freedom requires the use of linkages.

Applicant based the statement that Cadoz requires certain friction drives, etc. plus guides, etc. appearing in Applicant's last response on the teachings of Cadoz himself, particularly when referencing a two-degree-of-freedom mechanism shown in Figure 8 or in the device shown in Figure 9 which is even more elaborate. Such elements (friction drives, etc.) are clearly required when following the teaching of Cadoz et al as described

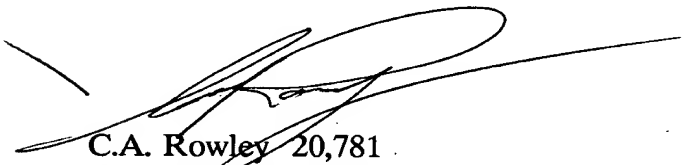
in the patent.

The Examiner goes on to say that even if this was the case, the claim does not exclude those parts anyway. The claims clearly defines a totally different structure than that of Cadoz and the inclusion of such elements would be in effect detrimental to Applicant's operation and no one following Applicant's teachings would ever incorporate such elements into applicant's device. It is believed, the language of the claim and the basis of the claim clearly excluded such superfluous material from the claimed invention.

It is submitted, Applicant's claim structure very clearly distinguishes over Cadoz and Cadoz et al. taken in conjunction with Clark et al. or vice versa or any other art of which the Applicant is aware.

It is believed that this application is in condition for allowance and such action is respectfully requested.

Respectfully submitted,



C.A. Rowley 20,781
Agent for Applicant

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Telephone: (604) 439-8654